

$$\begin{array}{c}
R_{17} \\
R_{19} \\
R_{20} \\
R_{21}
\end{array}$$
(pIV)

$$-\frac{0}{C} - 0 - \frac{R_{11}}{C}$$
(pVI)

wherein R<sub>11</sub> represents a methyl group, an ethyl group, an n-propyl group, an isopropyl group, an n-butyl group, an isobutyl group or a sec-butyl group; Z represents an atomic group necessary for forming an alicyclic hydrocarbon group together with the carbon atom; R<sub>12</sub> to R<sub>16</sub> each independently represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of R<sub>12</sub> to R<sub>14</sub> or either one of R<sub>15</sub> and R<sub>16</sub> represents an alicyclic hydrocarbon group; R<sub>17</sub> to R<sub>21</sub> each independently represents hydrogen atom, a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of R<sub>17</sub> to R<sub>21</sub> represents an alicyclic hydrocarbon group and either one of R<sub>19</sub> and R<sub>21</sub> represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group; and R<sub>22</sub> to R<sub>25</sub> each independently represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of R<sub>22</sub> to R<sub>25</sub> represents an alicyclic hydrocarbon group, provided that at least one of R<sub>22</sub> to R<sub>25</sub> represents an alicyclic hydrocarbon group.



10 (Amended). The positive photoresist composition for far ultraviolet exposure as claimed in claim 9, wherein the resin (B) further contains a repeating unit having an alkali-soluble group protected by at least one group containing an alicyclic hydrocarbon structure represented by the following formula (pI), (pII), (pIV), (pV) or (pVI):

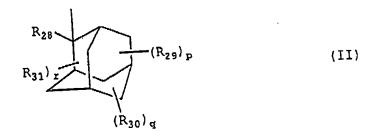
$$\begin{array}{c}
R_{17} \\
R_{19} \\
R_{20} \\
R_{21}
\end{array}$$
(pIV)

$$\begin{array}{c|c}
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wherein  $R_{11}$  represents a methyl group, an ethyl group, an n-propyl group, an isopropyl group, an n-butyl group, an isobutyl group or a sec-butyl group; Z represents an atomic group necessary for forming an alicyclic hydrocarbon group

together with the carbon atom;  $R_{12}$  to  $R_{16}$  each independently represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of  $R_{12}$  to  $R_{14}$  or either one of  $R_{15}$  and  $R_{16}$  represents an alicyclic hydrocarbon group;  $R_{17}$  to  $R_{21}$  each independently represents hydrogen atom, a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of  $R_{17}$  to  $R_{21}$  represents an alicyclic hydrocarbon group and either one of  $R_{19}$  and  $R_{21}$  represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group; and  $R_{22}$  to  $R_{25}$  each independently represents linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of  $R_{22}$  to  $R_{25}$  represents an alicyclic hydrocarbon group, provided that at least one of  $R_{22}$  to  $R_{25}$  represents an alicyclic hydrocarbon group.

11 (Amended). The positive photoresist composition for far ultraviolet exposure as claimed in claim 10, wherein the group containing an alicyclic hydrocarbon structure represented by the formula (pI), (pII), (pIII), (pIV), (pV) or (pVI) is a group represented by the following formula (II):





wherein  $R_{28}$  represents an alkyl group which may be have a substituent,  $R_{29}$  to  $R_{31}$ , which may be the same or different, each represents a hydroxy group, a halogen atom, a carboxy group, an alkyl group which may have a substituent, a cycloalkyl group which may have a substituent, an alkoxy group which may have a substituent, an alkoxy group which may have a substituent, an alkoxycarbonyl group which may have a substituent or an acyl group which may have a substituent, and p, q and r each independently represents 0 or an integer of 1 to 3.

19 (Amended). The positive photoresist composition for far ultraviolet exposure as claimed in claim 18, wherein the resin (B) further contains a repeating unit having an alkali-soluble group protected by at least one group containing an alicyclic hydrocarbon structure represented by the following formula (pI), (pII), (pIV), (pV) or (pVI):

 $\begin{array}{c}
R_{11} \\
C \\
R_{12} \\
C \\
C \\
R_{12}
\end{array}$ (pI)

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Ř<sub>14</sub>

B. C. J.

wherein R<sub>11</sub> represents a methyl group, an ethyl group, an n-propyl group, an isopropyl group, an n-butyl group, an isobutyl group or a sec-butyl group; Z represents an atomic group necessary for forming an alicyclic hydrocarbon group together with the carbon atom; R<sub>12</sub> to R<sub>16</sub> each independently represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of R<sub>12</sub> to R<sub>14</sub> or either one of R<sub>15</sub> and R<sub>16</sub> represents an alicyclic hydrocarbon group; R<sub>17</sub> to R<sub>21</sub> each independently represents hydrogen atom, a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of R<sub>17</sub> to R<sub>21</sub> represents an

alicyclic hydrocarbon group and either one of  $R_{19}$  and  $R_{21}$  represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group; and  $R_{22}$  to  $R_{25}$  each independently represents a linear or branched alkyl group having from 1 to 4 carbon atoms or an alicyclic hydrocarbon group, provided that at least one of  $R_{22}$  to  $R_{25}$  represents an alicyclic hydrocarbon group.

20 (Amended). The positive photoresist composition for far ultraviolet exposure as claimed in claim 19, wherein the group containing an alicyclic hydrocarbon structure represented by the formula (pI), (pII), (pIII), (pIV), (pV) or (pVI) is a group represented by the following formula (II):

$$R_{28} \longrightarrow (R_{29})_{p}$$

$$(R_{30})_{q}$$

$$(II)$$

wherein R<sub>28</sub> represents an alkyl group which may be have a substituent, R<sub>29</sub> to R<sub>31</sub>, which may be the same or different, each represents a hydroxy group, a halogen atom, a carboxy group, an alkyl group which may have a substituent, a cycloalkyl group which may have a substituent, an alkoxy group which may have a substituent, an alkoxy group which may have a substituent, an alkoxycarbonyl



group which may have a substituent or an acyl group which may have a substituent, and p, q and r each independently represents 0 or an integer of 1 to 3.